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SURVEY OF SOVIET HEAVY INDUSTRY (23)

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SURVEY OF SOVIET HEAVY INDUSTRY (23)

This is a series report, published approximately biweekly, which contains items of interest on Soviet heavy industry as reflected in articles, short news items, announcements, etc., appearing in various USSR and other publications. The items contained in this report fall under the broad categories listed below in the table of contents.

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MOTOR VEHICLES

Baby Limousine

This small red-beige machine drew our attention immediately in the endless flow of traffic moving along the Simferopol' highway. The tiny limousine is on the side of the road. Now three letters are clearly visible on the radiator: SMZ. This is the familiar trademark of the Serpukhov Motozavod. Why hide, it's the motorcycle side-cars which used to be produced here were not always highly praised. Naturally, the plant collective could not remain indifferent to these opinions. Now we see the first experimental model of a new type of automobile. The baby automobile differs considerably from its older brothers. Not only its external appearance attracts one's attention. Almost the entire body -- its upper part, the roof, trunk and other parts are produced from a new material -- plexiglass. Even certain motor component parts are made of plastic. The positive features of the new material are now well known: It is durable, and during the production process can be made in any color. The most important thing is that a body from plexiglass weighs 26 kg. less than a metal body. The new automobile has much in common with the Moskvich and Zaporozhets. Its working parts are compact auto-

Baby Limousine (cont'd)

mobile type elements. The system of rear and front suspension is considerably improved. This results in a smoother ride. The IZh-56 motor has been put in the automobile, which has a top speed of 60 km/h and can haul 169 kg. The motor uses 5 l. of fuel every 100 km. Tests on the first model of the new automobile will help in ascertaining its good features and defects, which will be taken into consideration in organizing the series production of the baby limousine. (Leninskoye Znamya, 1 November 1960. Full translation.)

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Icebreaker-Truck

The truck has been given a new job. Now it will begin to cut and chop up ice in backwaters, where river vessels spend the winter. Such an icebreaker-automobile has been built by specialists at the Gor'kiy Polytechnical Institute and production men from the "Teplokhod" Plant. Serious production has begun! The first four icebreakers were sent from Gor'kiy to the backwaters of the Siberian rivers, already chained by solid ice, before the holidays. Icebreaking in backwaters has been done manually until recently. The machines built by the Gor'kiy men will cut and chop ice around boats with a speed of up to 780 m/h. Even around such a tremendous Volga boat as the diesel electric steamer "Soviet Union," the icebreaker-truck will finish the job in 40 minutes. In other words, one of these machines will replace 50 workmen. The icebreaker also carries out the "rough" work: it carefully cleans the surface of the ice in the backwater of snowdrifts. What does this mechanical giant look like? It is an ordinary GAZ-69 truck, equipped with a worm-rotor mechanism and ice-cutter. The ice-cutter is mounted on the rear axle. It cuts ice up to 1 m thick with a 25 cm width of cut. What happens if

Icebreaker-Truck (cont'd)

the ice is extremely thin and cannot bear the weight of the truck? Once again do it by hand? The truck from Gor'kiy is not afraid of falling through the ice. The hermetically sealed amphibian truck body keeps the machine afloat. The engineers and workers of the "Teplokhod" Plant have produced a fine holiday gift for the country's river men. And this is right on time. It is already early winter and the fleet is hastening to moorings in the backwaters. (Ekonomicheskaya Gazeta, 6 November 1960. Full translation)

-2b-

Motorbike Motor

The new D-4 motor appeared in 1956. Its inventor and designer was a discharged soldier from Khar'kov, a metal worker in the past. This man, whom I would compare with Leskov's Levsha, was quite clever, able to bridge the "Irtysh" gap brilliantly. His motor was produced both in Khar'kov and Leningrad -- 140,000 units per year. Did any other machine enjoy the same success, recognition and demand? This was in spite of the obstacles which loomed up in the path of the modest motorbike! Certain persons from the machinery construction department of the USSR Gosplan were skeptical about a bicycle with the D-4 motor -- a machine for business trips. The D-4 had few friends. Its enemies were many. Thanks to their attempts, the bike motor of the Khar'kov inventor was used only for the road bicycle V-110 for 3 years. This bike had several major defects: it had no stop signal, turn signal and it could not be braked rapidly (in order to avoid colliding with an automobile in front) and it was impossible to touch the ground with one's feet (the saddle was too high and the upper cross-bar of the frame was uncomfortable.) The Khar'kov Bicycle Plant also prepared to produce the new V-918 motorbike, which had

Motorbike Motor (cont'd)

doubtless good features, shown during a 5,000 km run. But this bicycle also failed to attract attention. Test models of the "Riga-1" have been cruising along the streets of Riga for two years. It seems that this is the best motorbike model. But even this is not being series produced. All three brands have indisputable merits: wheel diameter has been decreased, the tire tube and casing is wider, there is a transmission, the motor is more powerful and the brakes are better. Thousands are riding modern, technically improved motorbikes, which are as effective as other types of urban and rural transportation. (Komsomolskaya Pravda, 18 October 1960. Partial translation)

Trolleybuses

It is morning, a busy Moscow morning. A huge trolleybus, with a 122 person capacity, is overloaded. People are hurrying to work. But the trolleybus, as if on purpose, is running slowly. "It's new, just came from the plant, and it isn't broken in yet," the conductor claims down the passengers. "It'll be okay," but the trolleybus wasn't okay. "The bus's leaving the line," the driver announced. What's the matter? Is this just an isolated case or something more? 26 new trolleybuses of the latest design with the brand of the plant imeni Uritskiy have broken down one by one for the last 6 months, they are laid up at Moscow's second trolleybus car-barn. In order to understand why this is happening, we shall go into the history of the development of the new trolleybus. Two years ago a RSFSR Gosplan interdepartmental commission developed the draft-technical plan for the ZIU-5 trolleybus, unified with a bus. The plant imeni Uritskiy was ordered to produce the new machine in the city of Engel's. Soon the experimental model arrived in Moscow, at the second trolleybus carbarn. Tests ran successfully. A new inter-departmental commission recommended that series production

Trolleybus (cont'd)

be begun. They got a production line ready in Engel's and in the Moscow Dinamo Plant, they prepared to produce traction motors and electrical equipment. The production of each new machine requires special attention. Its experimental model should meet the most stringent requirements. Things happened otherwise at the plant imeni Uritskiy.Flushed with the success of the tests on the experimental trolleybus, the chief designer's department, headed by Kashtanov, decided to speed up the rate of producing the unified machine. This was done carelessly. Although the diesel engine for the bus was still on the drafting board at NAMI[#], the trolleybus was hastily redesigned. In accordance with the new plan by the Uritskiy designers, the electric traction motor in the ZIU-5 is at a 12° angle with the reduction gear -- that is, in a position unknown in the history of trolleybus and bus construction. The central disc airbrake is set on the cardan shaft. Its operations had never been verified in practice. Without testing, by-passing the adjustment consignment, the chief designer's department of the plant

[NAMI = State All-Union "Order of Labor Red Banner" Automobile and Automobile Engine Scientific Research Institute.]

Trolleybus (cont'd)

imeni Uritskiy prepared for series production of a trolleybus which differed basically from the test model which was approved by the commission.

The RSFSR Ministry of Communal Economy and the Passenger Transport Administration of the Moscow City Executive Committee were pushing the plant. This put the fat into the fire. In addition, at the Dinamo Plant they had succeeded in producing 40 motors for the new buses under difficult conditions. The directors of the plant imeni Uritskiy, violating all standards, sanctioned the series production of the trolleybus. The first machines ran through the streets of Saratov and major design defects were immediately discovered. The angle between the traction motor and the reduction gear did not assure normal cardan shaft operation. After a short time the cardan shafts would break. These and other defects were obvious when the altered buses went out of order one after another in Saratov. They should have conducted serious research on the reasons for the breakdowns, but they did not do this. The plant imeni Uritskiy committed another and perhaps the most

Trolleybus (cont'd)

serious error -- it began series production on a trolleybus with defects contained in the design. Moscow, Leningrad, Khar'kov, Simferopol' and Saratov received ZIU-5 machines which were unfit to put into operations. Now commissions are going over these machines together with mechanics and determining the number of design defects. One of these commissions, together with workers from the Moscow second trolleybus carbarn, contained Kashtanov, the chief designer of the plant imeni Uritskiy. He was required to sign a report which listed 23 factory defects in a machine which had just left the plant. We must note with sorrow that there was no real business contact between the two plants upon which the fate of the machine depended. It is also strange that the RSFSR Gosplan and the Saratovskiy Sovnarkhoz assigned the production of a trolleybus, unified with a bus, to the plant imeni Uritskiy, which had neither a proper technical base nor experience in producing machinery of their own design, nor highly qualified specialists in the field of designing trolleybuses. Here is the result: 50 worthless machines, a whole group of technical ignoramuses.

Trolleybus (cont'd)

It is hard to understand how the RSFSR Gosplan could plan as early as 1960 the production of 250 ZIU-5 trolleybuses. It is true that when things took a turn for the worse the plant imeni Uritskiy requested that the plan be reduced to 100 trolleybuses in the hope that it would be able to "experiment on the machine during the series production." They gave permission for this, but even 100 machines with major design defects is quite a bit. The unjustified haste and, frankly, the amateurish attitude to an important task led to the fact that nothing came of the idea of building a bus unified with a trolleybus. The test model of the bus has also broken down. (Izvestiya, 16 November 1960. Full translation)

MACHINE TOOLS

Automatic Lines

The planning of production and introduction of new techniques are two factors which are interconnected. Intentions of a plant collective to mechanize and automate processes can lead to nowhere if they, these intentions, are not reinforced by the correct, rational planning of production. Unfortunately, this is what happened at the Third State Bearing Plant in Saratov. As early as 4 years ago this plant planned to install 12 new automatic lines and construct on the basis of existing equipment several short alternating-production lines with mechanized element transfer. But up to the present, nothing substantial has been done. The reasons are faulty planning. For example, in 1958, the plant was about to automate the production of No. 202 bearings. The Saratov plant did not build this line, for the deputy head of the motor vehicle-tractor machinery construction department of the RSFSR Gosplan,

Automatic Lines (cont'd)

Nevelev, cut the plan for producing No. 202 bearings at the Saratov plant and transferred the remainder of the order to Izhevsk. In order to occupy the production facilities, the third bearing plant planned the production of No. 25 bearings, produced in Kuybyshev. Our plant began to produce two small-series bearings instead of one mass production bearing. Not only the construction of automatic lines but even the use of special automatic machine tools became unprofitable. We are not even mentioning the fact that the Saratov and Izhevsk plants engaging in incorporating production handled previously by other plants have expended much time and money in vain. Mabaly in conducting such an absurd operation Nevelev was attempting to cut down inefficient freight shipments? Not at all. If this were the case he should have first of all transferred to Izhevsk an order for producing No. 2505 bearings, the only consumer of which is a local plant. These bearings are still produced in Saratov. We were also planning to build an automatic line for Nos. 206 and 306 bearings, which have been produced here for 20 years. But deputy chief of

Automatic Lines, (cont'd)

"Soyuzglavmash" Arutyunov, and deputy chief of the auto tractor and agricultural machine construction department of the USSR Gosplan, Devyatov, suddenly decided to divide the production of these bearings between four plants. Their series production became infinitesimal, and the construction of automatic production lines was obviously not at all suitable. Right now the plant is assembling only lines for producing bearings for railroad car axle boxes. We should discuss this in more detail, for also in this case certain defects in planning were manifested, this time in the area of planning-design.

When the deadline was determined for incorporating automatic lines, the Moscow Special Design Bureau No. 6 was assigned to be the master planning organization. Actually it, not without the knowledge of the USSR Gosplan, planned only lathe and grinding sections. The planning of the remaining elements of the line was taken over by special design bureau No. 10 in Voronezh and the Moscow "Elektropech'" Trust Design Bureau. The Committee on Automation and Machine Construction promises to include the development of a refrig-

Automatic Lines (cont'd)

eration unit in the plan of the Central Refrigeration Machine Construction Design Bureau for 1961. Because of the fact that Special Design Bureau No. 6 declined to carry out the role of master organization, the coordination of separate elements of the plan must be handled by the purchaser plant. Here is the miserable result of such planning. Right now only the lathe section units have been produced and tested. They were rather expensive and they cannot be operated normally because it is impossible to plan a regular feed of forgings with such severe tolerances. The forge section has not even been planned up to the present. Much is being said on the necessity of specializing bearing enterprises. Many resolutions have been passed on this, and yet the future plan for developing our plant is not yet clear to our collective. As early as last year the "Soyuzglavmash" and the RSFSR Gosplan oriented us on the development of floating bearing production and on curtailment of spindle bearing production. This was written in this year's plan. Directed by this plan, the plant began to carry out suitable preparation, in particular, they disassembled the automatic line for assembling and con-

Automatic Lines (cont'd)

serving spindle bearings. When the plan was specified for the second half of the year, it became known that the demand for floating bearings had decreased by 8.5% and the demand for spindle bearings had increased almost double. Finally, we must mention that machine tool builders are organizing the production of modern automatic equipment too slowly. The Kiev Automatic Machine Tool Plant, the Khar'kov Machine Tool Plant, the Leningrad plant imeni Il'ich and other plants are continuing to produce long obsolete semi-automatic machine tools. When we attempted to coordinate with the Khar'kov Machine Tool Plant the technical assignment of producing an automatic machine tool, they answered indifferently: "Be satisfied with the old semi-automatic tools, and if you don't want to -- you can refuse all funds." A ridiculous picture is revealed: before so-called new machine tools which have just been received can be put into operation, the bearing plant must modernize them with their own resources. This is known by the directors of machine tool plants and RSFSR Gosplan and USSR Gosplan employees, but nothing is being done about it.

Automatic Lines (cont'd)

It is high time to remove the obstacles from the path of full mechanization and automation of bearing production, to give plants a clear long-term plan of development. It should be made clear to machine tool builders that they must consider the requirements of the plants using their products.
(Ekonomicheskaya Gazeta, 3 November 1960. Full translation)

LOADING AND HOISTING MECHANISMS

Electrocars

The Batumi Electrocar Plant is a young enterprise. It has been in existence only two years. This is the country's only specialized enterprise for producing 500-750 kg freight capacity hoist platforms. In spite of considerable progress in past years, the mechanization of auxiliary production processes is not at a suitable level. Many plants transfer blanks to work areas, parts from one operation to another, and carry out shavings by means of auxiliary workers on handcarts. The part played by the freight loader is still quite important at railroad stations and in ports. Therefore the interest is understandable which is shown by workers of industry and transport for the production at our plant. The battery autocart produced by us, with a hoist platform, thanks to its small size, can approach directly to work points even in small shops and with special packing can carry out loading and unloading operations.

Electrocars (cont'd)

without auxiliary workers. According to our estimates, one electrocar, model EKB-1-750 with a 750 kg load capacity, can take care of continuous operations of 100 to 120 average metal cutting machine tools during series production. The plant collective has done much to increase the technical equipment and incorporation of modern techniques in production. The pride of the plant is the pinion gear machine sector, where production of gears takes place at second category accuracy on modern tooth-milling, gear mortizing, gear planing and shaving semi-automatic machines. Plant engineers together with employees of the Tbilisi Scientific Research Electrotechnical Institute have designed a production sector for the mechanical machining of reduction gear frame parts. The plant workers, on the basis of the basic electrocar model, have designed and produced two new models: a self-dumping electric car and an electrocar with a hoist. All three types of electric cars produced by the plant are on exhibit in Moscow at the All-Union Exhibit of the Achievements of USSR National Economy, in the Georgian SSR Pavilion, and they have received favorable comments. Plant efficiency proposals

Electrocar (cont'd)

have done much toward incorporating new technology and improving machinery design. At the suggestion of Chinchaladze 30 to 35 mm thick metal cutting was introduced with liquified gas. This increased productivity on the operation two-fold and saved a conditional annual 10,300 rubles. A device for cutting thick-walled tubing introduced by plant director Lomtadze saved 33,830 rubles. Metal worker Valit suggested and produced a device for cutting splines, the savings from which were about 11,000 rubles. Valuable efficiency proposals were introduced by Chargeishvili, Vartanyan, Tevzadze and others.

The workers and engineers of the plant are still faced with many imperative and serious tasks. But in order to solve them we need the aid of the Batumi City-Party Committee, the Sovnarkhoz and the Georgian Gosplan. The electrocar plant is temporarily located in warehouses in the Batumi port area. This is holding back further development of the enterprise. Calculations show that 2000 electro-cars per year can be produced on the production area

Electrocar (cont'd)

in use, while the planned capacity of our enterprise for 1965 will be 10,000 electric cars. It is clear that the question of planning plant construction is an imperative matter and should be a cause of concern for the Sovnarkhoz and the Georgian SSR Gosplan. However, the plant planning, delegated to the "Gruzgiproshakh" Institute, has not yet been started. It is not yet known when investigation and planning will begin. The question of cooperative deliveries is a weak point at the plant. Due to the lack of rubber working rolls we send the processed tires to the Sverdlovsk Tire Plant. These tires, after they have been treaded, are returned to us. This "cooperation" along the route Chelyabinsk (tubing)-Batumi-Sverdlovsk-Batumi hinders rhythmic operations and is expensive. 52 varieties of forgings (about 600 tons per year) are received from the cities of Kirov and Chebarkul' ~~and~~ Chelyabinskaya Oblast. At the same time the capacity of the forge shop of the Kutaisi Motor Vehicle Plant is sufficient to produce hot press-worked blanks for the electric cars. The Georgian Sovnarkhoz should resolve the question of organizing hot press-working for electric cars at the motor vehicle plant by the

Electrocar (cont'd)

beginning of 1961. The further development of our plant and its technical level depends on how rapidly all of these problems can be solved. The collective of the Batumi Electrocar Plant, organizing series production in a short period of time, is doing its utmost to cope successfully with the new major tasks which emanate from the historic resolutions of the July Plenum of the Central Committee of the Party. (Zarya Vostoka, 19 October 1960. Full translation)

ELECTRICAL POWER EQUIPMENT

Armenian Electrical Equipment

It has become a fine Soviet tradition to greet signal dates in the life of our country with new achievements and successes of labor. The Armenian Electrical Plant was the first this year to organize and begin production of five types of power transformers with aluminum coils instead of copper. The design of these transformers, worked out by the Armenian affiliate of the All Union Scientific Research Institute of Electromechanics, has great prospectives and in the coming years all transformers produced at the plant will be made exclusively with aluminum coils. This will make it possible to save thousands of tons of scarce copper wire. The development of these transformers was involved in certain difficulties. Nevertheless our engineers were able to use original design decisions and several new materials to achieve high technical-economic indices on the new transformers. They are smaller in size and lighter than the old copper coil transformers, suffer less loss and heat-ups, as well as less transformer lubricant. They are more convenient, simpler and are more

Armenian Electricl Equipment (cont'd)

economical in operation. The plant and the affiliate produced and delivered a test consignment of generators at 20 and 40 kw high frequency, in a short period of time. These generators, running at increased rotation speeds are equipped with automatic regulation mechanisms, assuring high accuracy of tension for the consumer. The generator is activated by selenic rectifiers. The production of this machinery required the use of new insulation and coil material.

At the same time a new design decision was outlined for the generator, in which its weakest point -- the high speed rotor coil -- is transferred to the base plate and is made immovable, extremely reliable in operation. The test model of this machine with double magnetic current will be completed by the 40th Anniversary Celebration of Soviet Authority in Armenia. Interest is also drawn by the development of synchronous generators with external closed magnetic flow with a 200 kw capacity, with a frequency of 400 cycles/second and a rotation

Armenian Electricl Equipment (cont'd)

speed of 12,000 rpm. With the development and implementation of gas turbines instead of diesel engines, these high speed generators will doubtlessly find broad application in the national economy. Test models of the generators are being prepared for tests by November of this year. Recently the field of application of synchronous generators has been expanded considerably as well as that of transformers for obtaining high frequency current, which finds broad application in various branches of science and technology. Our affiliate is developing a new series of frequency transformers and test models have already been produced of two types of transformers, 12 kw at 800 cycles/second and 30 kw at 2400 cycles/second. In November of this year, the test model of a transformer will be completed with a capacity of 125 kw at 1200 cycles/second.

The new series includes 14 types of machines. The planned frequency transformers differ considerably from the former models of such machines. The new transformers are produced in a 1-body vertical type with the use of water coolant. In the planned series new materials and semi-

Armenian Electricl Equipment (cont'd)

finished materials are used. After the first preliminary tests the new machines produced good results and high technical-economic characteristics, in no way inferior in weight, size and use coefficient to the best foreign models. The plant and affiliate are producing a model of a new generator, with 12 kw capacity at 400 cycles/second designed for operating in a diesel feeding aggregate, by the 40th Anniversary Celebration. The series production of the machine is planned for 1961 at the plant. Much has been done for the development of a series of automatic diesel units of the ASD-A type, with a capacity of 5, 10, 20 and 50 kw. Ignition of the unit, control over the diesel operational rate, tension regulation, operation on parallel work, stoppage under abnormal and accident conditions -- take place automatically and do not require an operator. A fine gift for the Celebration is also the production of test models of series of saturation power throttles, from 5 to 8 kw. These throttles find broad use in the accurate and automatic regulation of revolutions in electrical drives, in regulating systems for powerful electric kiln temperatures, in units

Armenian Electrical Equipment (cont'd)

in units for obtaining mono-crystals of silicone and Germanium, in lighting engineering and many other fields. Until recently the series production of these saturation throttles had not been undertaken, and the affiliate has carried out this development for the first time. As a whole the series received approval and successfully withstood comparison with analogous machinery of foreign firms. Right now the production of 5, 7, 10, 14, 20, and 28 kw throttle test models is being completed, and testing is being done. After this the plans will be transmitted to the Armenian Electric Plant for organization of production for 1961. Besides these projects on new technology, carried out jointly by the plants, its affiliate and other base plants, much experimental design and scientific research work is being done for the development of new electrical measuring instruments, cable production, apparatus, semi-conductors, engines with free pistons.

The development of a test model of a self-adjusting system for automatic control of the aluminum electrolysis process is being developed at the Kanaz plant, as well as equipment for automatic operation of transformer production

Armenian Electrical Equipment (cont'd)

at the Armenian Electric Plant. The Armenian SSR Sovnarkhoz has delegated to the affiliate the fulfillment in 1961-1963 of several tasks connected with the organization of the first experimental plant in the Republic with automated, mass-conveyor production of asynchronous motors, as well as the development of design and technological documents for electrical machinery, transformers, units and apparatus for the tropics. The successful solution of the great and responsible problems first by the Armenian affiliate of the All-Union Scientific Research Institute of Electromechanic will depend to a great extent on the rate of development of its own experimental-production, tool-technological and laboratory-experimental base. At present this base is insufficient and limits to a great extent the potentials and work fulfillment deadlines on new technology. In the coming two years it is necessary to construct and begin operations on primary laboratories and production buildings for the affiliate, as well as to provide in the Seven Year Plan the necessary capital investments for completion of the entire construction complex

Armenian Electrical Equipment (cont'd)

of the Armenian affiliate of the Institute. The collective of the Armenian affiliate of the Institute will apply all of its knowledge, resources and capabilities to contribute toward the fulfillment of the great plans of the Communist Party and the Soviet Union, which is leading us toward the victory of Communism. (Kommunist (Yerevan), 6 November 1960. Full translation)

MISCELLANEOUS

Plant Cooperation

A few days ago the newspaper Moskovskaya Pravda announced the valuable patriotic act by the collectives of two of Moscow's enterprises: The Compact Automobile Plant and the Balashikhinskiy Machinery Plant imeni 40th Anniversary of the October Revolution. Both collectives have signed an agreement for creative cooperation, joining forces in competing for achieving outlined goals. The Compact Automobile Plant is well known to Muscovites. The Balashikhinskiy plant is less known to the inhabitants of our city. Recently it came within the Greater Moscow zone, and no more than three years ago began to gain a reputation as a supplier of oxygen equipment for metallurgy, chemistry and other branches of industry. This is extremely important for the national economy. It is sufficient to say that the use of oxygen increases blast furnace production by 8 to 10%, open hearth furnaces, 20 to 30%. In the coming 6-8 months, the machinery builders of the latter plant will receive

Plant Cooperation (cont'd)

more than 40,000 sq m of production area, will put dozens of complicated machines and units into operation and will introduce new technological processes. All of this naturally must be done on the highest technical level. However, the young collective does not yet possess sufficient experience in production mechanization and automation. At the enterprise more than 70% of operations are now done manually, and the plant regularly is forced to go into a last minute rush. The Balashikhinskiy Plant needs help. This was immediately clear to the employees of the Moscow City Sovnarkhoz Motor Vehicle Industry Administration, which recently accepted the enterprise among the Moscow ones. It also became clear to the machine builders themselves, when they acquainted themselves with the level of production of their neighbors. And then the plant public opinion decided to appeal to the workers of the Compact Automobile Plant. This correspondent visited both plants at that time when friendly relations were being developed between them. We were able to be at the automobile plant on the day when a group of workers and engineers came from the other plant to sign the agreement. They were treated as

Plant Cooperation (cont'd)

honored guests, shown about the plant and were shown everything the automobile builders had. "What we need is coloring in the electrostatic field," said chief of the mechanization and automation department of the Balashikhinskiy Plant, Dymchenko. "It would be good if you would help us design similar chambers at our plant." "Your galvanic shop is in good condition," chief technologist from the Balashikhinskiy Plant, Plyshevskiy, said with satisfaction. "Please consult with us on our design." All answers were the same for all questions: "Of course we'll help." They became acquainted not only with the technology. During the excursion, acquaintances were formed which promised to develop soon into a great and productive friendship. Two persons met and became friends on that day -- Brigadier Kostyanitsyn from the Automobile Plant and Brigadier Kuvayev from the other. From this day on competition began between them. We speak of "creative cooperation" because the Balashikhinskiy Plant does not want to become a dependent Plant. The workers of the automobile plant cannot consider themselves to be great patrons. You can be sure

Plant Cooperation (cont'd)

of this if you read the obligations published below. These obligations were discussed at a special expanded session of the automobile plant Party Committee, where members of the administration and public organizations of the Balashikhinskiy were present, where all questions of cooperation between the two enterprises were discussed in detail. Both collectives are equal partners in one great job -- the struggle for technological progress, for the fulfillment of the Resolutions of the 21st Party Congress, for fulfillment of the pre-October Socialist obligations!

Compact Automobile Plant: Having discussed the problems which must be solved for fulfilling the program outlined by the "Plant imeni 40th Anniversary of the October Revolution, we have found it possible without damage to our basic production, to produce equipment for the Balashikhinskiy Plant which is necessary for starting operations on new equipment (stamps, tools, equipment). We shall aid in mechanizing the most labor-consuming processes, organize the operations of the welding laboratory, take part in developing effective technological processes. The collective of

Plant Cooperation (cont'd)

the Moscow Compact Automobile Plant will aid the Balashikhinskiy Plant in incorporating modern methods of painting products, the organization of operative planning, and inner-plant accounting, in improving the wage system, assuring the maximum interest on the part of the workers in increasing labor productivity. We promise to share experience in training highly skilled cadres, conducting cultural-mass and agitation work, developing competitions for Communist labor.

Plant imeni 40th Anniversary of October Revolution: In order to study and incorporate the experience of front rank Moscow collectives, we will at least once every 10 days conduct special purpose excursions to enterprises, the experience of which we shall transfer to our plant. Between 1 November and 31 December 1960 we shall conduct an all-plant public inspection of the level of technology, techniques, and design improvements on products. For a more rapid increase in the level of production and incorporation of progressive technology, we shall form a complex brigade con-

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Plant Cooperation (cont'd)

sisting of the most skilled specialists in our Plant, the Moscow Compact Automobile Plant, and Scientific Research Institute Scientists. In the first quarter of the third year of the Seven Year Plan, this Plant shall begin to work on a strict 10-day schedule, assuring the definite fulfillment of all points of the plan for organizational technical measures, making broad use of new methods of machining parts, multi-purpose assembly mechanisms and other innovations. (Moskovskaya Pravda, 15 October 1960. Full translation)

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